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# Financial Reporting Considerations Related to Environmental Events and Activities

## Introduction

Environmental, social, and governance (ESG) matters have become common topics in the news in recent months. At the same time, investors, credit rating agencies, lenders, regulators, policy makers, and other interested parties have become increasingly focused on these issues. In addition, the FASB, SEC, and CAQ have all provided public information<sup>1</sup> regarding the importance of considering environmental matters, both for preparers of financial statements as well as auditors.

Given the increased interest in ESG matters from a multitude of different parties, many entities in virtually all industries are considering how these matters will affect their business strategies, operations, and long-term value. As entities develop business strategies designed to address the evolving ESG landscape, they will also need to incorporate ESG considerations when preparing their financial statements. In doing so, they should ensure that any plans or commitments related to environmental initiatives are considered in a consistent manner for both sustainability reporting and the preparation of the financial statements. For example, when preparing financial statements, an entity that plans to reduce its carbon footprint should evaluate the impact of those plans, if any, on topics such as the useful life of assets, impairment of assets, asset retirement obligations (AROs), other liabilities, and disclosure requirements under current U.S. GAAP.

<sup>1</sup> See FASB Staff Educational Paper *Intersection of Environmental, Social, and Governance Matters With Financial Accounting Standards*, issued on March 19, 2021; SEC's interpretive release *Commission Guidance Regarding Disclosure Related to Climate Change* (the "2010 interpretive release"), issued on February 8, 2010, and request for input, *Public Input Welcomed on Climate Change Disclosures*, issued on March 15, 2021; and CAQ White Paper *Audited Financial Statements and Climate-Related Risk Considerations*, issued on September 9, 2021.

Entities may also pursue specific arrangements or transactions in connection with climate-related objectives that involve complex accounting issues, require a high degree of judgment, or both. For example, if entities enter into transactions involving sustainability bonds or virtual power purchase agreements (VPPAs), they will need to assess whether these transactions include embedded derivatives. Similarly, entities that enter into certain types of energy service agreements (ESAs) may need to evaluate whether those arrangements contain an embedded lease. In addition, for other types of transactions with climate-related objectives, such as compensation arrangements linked to the achievement of company-specific environmental metrics, entities may be required to assess the probability of achieving such metrics.

Further, entities should be mindful of SEC reporting requirements related to climate change and climate-related topics, particularly those related to the business, risk factors, MD&A, and results of operations sections of SEC filings. Although the SEC is widely expected to provide updated reporting requirements regarding climate-related topics in the next several months, it has also publicly announced that it will increase its focus on climate-related disclosures when reviewing public company filings, including assessing the extent to which public companies have provided information that is consistent with the SEC's 2010 interpretive release. In a manner consistent with this directive, the SEC has recently issued comments to several public companies in a variety of industries.

On September 22, 2021, the SEC publicly released a [sample letter](#) that highlights the types of comments it may issue to public companies regarding climate-related disclosures. The sample comments, which the SEC has published before publicly releasing any of the recently issued company-specific comments, serve as an early warning to registrants that have not yet received any company-specific comments to date.

For more information about recent SEC communications regarding climate-related matters, see Deloitte's September 27, 2021, [Heads Up](#).

This *Financial Reporting Alert* examines certain potential impacts of climate-related matters on an entity's financial accounting and reporting in the context of the existing accounting guidance and current regulatory environment. While these impacts will vary depending on the entity's industry along with factors such as relevant regulatory, legal, and contractual obligations, all entities should evaluate environmental-related financial accounting and reporting implications. The remainder of this publication is intended to address these matters.

## Potential Accounting and Reporting Implications of Environmental Objectives

Entities across various industries have begun issuing public statements regarding their plans to address the impacts of climate change on their businesses, and recent news headlines have often highlighted these statements — for example, "Entity A commits to being carbon neutral by 2030" or "Entity B pledges to reduce greenhouse gas emissions by 90% by 2040." As a result, questions have arisen about the accounting and disclosure considerations related to these types of statements made by entities. While such considerations will depend on the specific facts and circumstances of an entity's climate-related public statements, plans, and actions, this section highlights certain key considerations for evaluating the accounting and disclosure implications.

Note that before the evaluation of implications, it is critical to understand the specific public statements made by management (i.e., personnel with the appropriate authority) and to determine the details of any plans and actions intended to support those statements. In the examples above, one might ask how each entity plans to reach its goal and seek to understand the specific activities that the entity believes are necessary to meet its objective. By gaining an understanding of the entity's plans and the specificity of any commitments made by appropriate management personnel, one will be better able to evaluate the effect on the entity's net assets, including whether any assets are impaired or any contractual liabilities

exist. For example, Entity A may operate in a jurisdiction in which it is required to provide a certain level of carbon offsets, either internally generated or purchased, as a part of its plan to become carbon neutral. Depending on the facts and circumstances of the government regulation and Entity A's specific operation, Entity A's obligation to provide carbon offsets for carbon emissions may result in a liability that needs to be recorded and potentially disclosed.

## Assessing the Impact on Assets

Entities should evaluate the impacts of their climate-related public statements and supporting plans and actions across various areas of the business as well as the related accounting implications of those plans in light of existing accounting standards. For example, if Entity B plans to reduce its greenhouse gas emissions by replacing its current manufacturing equipment with new technology and equipment that emits fewer greenhouse gases, it should evaluate whether there has been a triggering event<sup>2</sup> related to the recoverability of its existing manufacturing equipment and also reassess whether the current useful life of its existing manufacturing equipment remains appropriate. Further, if Entity B has goodwill related to a reporting unit that includes the product lines produced by the existing equipment, it should assess whether its future manufacturing process will result in a different profit margin profile. Lower future profit margins could affect the expected future cash flows of the reporting unit and ultimately could alter the results of the entity's goodwill impairment test. See the [Use and Recoverability of Long-Lived Assets](#), [Environmental Obligations](#), and [Asset Retirement Obligations](#) sections for more detailed information.

## Assessing the Incurrence of Liabilities

In addition to considering whether it has any contractual obligations to address climate-related issues, an entity should consider whether government or regulator actions or the entity's own public statements, plans, or actions could give rise to any other legal or constructive obligations that would require accounting or disclosure, or both, in its financial statements. Paragraph 36 of FASB Concepts Statement 6<sup>3</sup> identifies three essential characteristics<sup>4</sup> of a liability:

1. "[I]t embodies a present duty or responsibility to one or more other entities that entails settlement by probable future transfer or use of assets at a specified or determinable date, on occurrence of a specified event, or on demand."
2. "[T]he duty or responsibility obligates a particular entity, leaving it little or no discretion to avoid the future sacrifice."
3. "[T]he transaction or other event obligating the entity has already happened."

Paragraph 40 of FASB Concepts Statement 6 goes on to describe a liability as a present obligation that exists as of the financial statement date and requires the transfer of economic benefit to a counterparty.

This section discusses the three characteristics outlined in paragraph 36 of FASB Concepts Statement 6 (shown above). We believe that it is helpful to consider the characteristics in (1) and (2) above together, given the similarity in those characteristics.

<sup>2</sup> See ASC 360-10-35-21 for examples of events or changes in circumstances that may indicate a long-lived asset (asset group) may not be recoverable. For titles of FASB Accounting Standards Codification (ASC) references, see Deloitte's ["Titles of Topics and Subtopics in the FASB Accounting Standards Codification."](#)

<sup>3</sup> FASB Concepts Statement No. 6, *Elements of Financial Statements*.

<sup>4</sup> Although the FASB is planning to update its Concepts Statements in the fourth quarter of 2021, we understand that these general characteristics for identifying a liability will remain largely similar.

## ***Characteristics (1) and (2) — Present Duty That Entails Probable Future Transfer and the Use of Assets, With Little or No Discretion to Avoid Future Sacrifice***

In the assessment of whether a present obligation exists, the determination of whether there is a legal obligation is often clear and unambiguous. However, the definition of the term “legal obligation” in the ASC master glossary acknowledges that such an obligation can be established by “an existing or enacted law, statute, ordinance, or written or oral contract or by legal construction of a contract under the doctrine of promissory estoppel.” If an entity makes a promise to a third party, including the public at large, about its intentions to undertake certain activities, significant judgment may be required to determine whether the entity has created a legal obligation under the legal doctrine of promissory estoppel, which is defined as the “principle that a promise made without consideration may nonetheless be enforced to prevent injustice if the promisor should have reasonably expected the promisee to rely on the promise and if the promisee did actually rely on the promise to his or her detriment.”<sup>5</sup>

Entities should evaluate the existence of legal obligations on the basis of current laws, regulations, contractual obligations, and related interpretations and facts and circumstances; they should not forecast changes in laws or in the interpretations of such laws and regulations. The impacts of any changes in laws or regulations should be considered in the period in which the new or amended laws or regulations are enacted. In addition, in determining whether a public statement has created a legal obligation under the notion of promissory estoppel, entities should work closely with legal counsel to evaluate their own specific facts and circumstances. If the results of this determination are unclear, they may wish to obtain a legal opinion to support their conclusions.

As described in FASB Concepts Statement 6, a constructive obligation may be, but is not necessarily, a legal obligation, and an entity may incur a constructive obligation in other ways beyond entering into a contract or an exchange transaction.<sup>6</sup> Assessing whether an entity has a constructive obligation that is not a legal obligation requires significant judgment in light of the entity's facts and circumstances. For an event or circumstance (e.g., a public statement) to rise to the level of a constructive obligation that should be recognized as a liability, the entity must, as a result of the event or circumstance, be obligated to sacrifice assets in the future, leaving it little or no discretion to avoid the future sacrifice. The assessment of whether an entity has a constructive obligation related to its climate-related public statements, plans, or actions should not be a one-time assessment; rather, the entity should continue to assess its facts and circumstances as its climate-related initiatives progress.

If an entity determines that it has a present obligation that exists as of the financial statement date, it should consider whether it is required to transfer economic benefit to a counterparty (that is not an owner) to settle that present obligation. If the entity determines that it has a present obligation as of the financial statement date but that the present obligation does not require it to sacrifice assets or otherwise provide economic benefit to the counterparty, the obligation would not be recorded as a liability.

## ***Characteristic (3) — Transaction or Obligating Event Has Already Occurred***

If an entity determines that it has or may have an obligation (contractual, legal, or constructive) that should be recorded in its financial statements, careful consideration should be given to (1) the point in time at which the entity's obligation began and (2) whether the obligation exists as of the financial statement date. Liabilities arise as a result of a past event. For example, as employees render services to an entity, the entity incurs the liability to pay the employees for their services. The rendering of services in exchange for payment is an example of a reciprocal transaction, whereby one party exchanges a good or service with another party (employee

<sup>5</sup> See ASC 410-20-20, which cites the definition of promissory estoppel that is used in *Black's Law Dictionary*, seventh edition.

<sup>6</sup> See paragraphs 202 and 203 of FASB Concepts Statement 6.

rendering services in exchange for payment). However, obligations arising as a result of a government action or an entity's climate-related public statements, plans, or actions may not be reciprocal transactions but rather obligations to the public at large or other relevant stakeholders. Assessing the point in time at which an entity has incurred an obligation that is not the result of a reciprocal transaction may require significant judgment in light of all relevant facts and circumstances. For example, an entity's obligation may arise as a result of future carbon emissions, which may indicate that the obligation does not exist as of the financial statement date.

## Disclosure Considerations

Entities should also evaluate whether any of their climate-related public statements, plans, or actions require disclosure in the financial statements, even if they conclude that there is nothing to record in the current-period financial statements. ASC 275 requires an entity to disclose information that helps financial statement users assess major risks and uncertainties. Specifically, ASC 275-10-50-1 requires disclosure of the risks and uncertainties related to the following:

- a. Nature of operations, including the activities in which the entity is currently engaged if principal operations have not commenced
- b. Use of estimates in the preparation of financial statements
- c. Certain significant estimates
- d. Current vulnerability due to certain concentrations.

### Example

Entity X operates in an industry in which a key product line uses a significant amount of petroleum. It expects the product line to evolve away from petroleum in the near term, which will affect the nature of its operations, and it believes that the product line will ultimately no longer rely on petroleum. In a manner consistent with its public statements, X is actively engaging with vendors of alternative fuel sources to identify a green alternative and expects such alternative to be available for use in the near term. On the basis of its facts and circumstances, X concludes that it does not have any present obligations (contractual, legal, or constructive) or impacts to other financial statement accounts to record in its financial statements; however, it may be required to disclose the risks and uncertainties related to the future of this key product line in accordance with ASC 275.

To assess whether its plans or actions result in risks and uncertainty that must be disclosed in accordance with ASC 275, an entity must apply professional judgment after considering all relevant facts and circumstances.

In addition, entities should assess whether any of their public statements regarding climate-related initiatives give rise to commitments that are required to be disclosed in the financial statements. The ASC master glossary defines a "firm commitment" as "[a]n agreement with an unrelated party, binding on both parties and usually legally enforceable," that is both (1) specific in "all significant terms, including . . . fixed price, and the timing of the transaction," and (2) "includes a disincentive for nonperformance that is sufficiently large to make performance probable."

ASC 440 requires an entity to disclose certain situations that are not recorded in the financial statements. Specifically, ASC 440-10-50-1, as amended by [ASU 2016-02](#),<sup>7</sup> requires disclosure of:

- a. Unused letters of credit
- b. Leases . . .
- c. Assets pledged as security for loans
- d. Pension plans . . .

<sup>7</sup> FASB Accounting Standards Update (ASU) No. 2016-02, *Leases (Topic 842)*.

- e. The existence of cumulative preferred stock dividends in arrears
- f. Commitments, including:
  - 1. A commitment for plant acquisition
  - 2. An obligation to reduce debts
  - 3. An obligation to maintain working capital
  - 4. An obligation to restrict dividends.

In addition, ASC 440-10-50-2 requires disclosure of “unconditional purchase obligations.”

These examples are not an exhaustive list of commitments to be disclosed, and entities should evaluate their specific facts and circumstances to determine whether they have any commitments that should be disclosed in their financial statements in accordance with ASC 440.

Note that in addition to the disclosure requirements set forth by U.S. GAAP, entities should consider SEC reporting requirements, as discussed above. For further information, see Deloitte’s September 27, 2021, [Heads Up](#).

## **Developing Estimates and Maintaining Consistency of Assumptions and Estimates**

As entities focus on climate-related initiatives and make changes to their businesses, they may face challenges related to selecting appropriate assumptions and developing reliable estimates. Nevertheless, they will still be required by U.S. GAAP to develop estimates that underly various accounting conclusions. To develop such estimates, entities will need to consider all available information.

Further, entities may be required to use assumptions or estimates for more than one purpose (e.g., forecasted revenues or cash flows may be an assumption that is used in multiple impairment tests, assessments of the realizability of deferred tax assets, and the evaluation of an entity’s ability to continue as a going concern). When a single assumption is used in multiple analyses, entities should verify that the same assumption is being used in each analysis unless the guidance in U.S. GAAP permits otherwise. In addition, entities should verify that assumptions and estimates outside of the financial statements (e.g., sustainability reports) are consistent with those used when preparing estimates required by U.S. GAAP.

Entities should also consider external events and circumstances, including changes in regulatory environments, when assessing whether (1) the changes they made in assumptions and estimates from the previous period were appropriate or (2) it was appropriate in the current period *not* to have updated or changed the assumptions used in the previous period.

## **Use and Recoverability of Long-Lived Assets**

As an entity considers climate-related matters, it should continue to evaluate the accounting and reporting impacts of its goals or targets with respect to its carbon footprint. Understanding how its business shifts to support these goals or targets is critical to evaluating the ongoing use and recoverability of its long-lived assets, including goodwill, as well as other indefinite-lived intangible assets and property, plant, and equipment (PP&E). On the basis of these business shifts, an entity may need to reassess the useful life of an asset or test an asset (asset group) for impairment.

It is also important to consider the order in which assets are tested for impairment so that the entity can ensure that any required adjustments are made before including those assets in the testing of larger units of account. Assets that are not held for sale should be tested for impairment in the following order: (1) assets outside of the scope of ASC 360-10 (other than goodwill), such as inventory, capitalized costs to obtain or fulfill a revenue contract, and

indefinite-lived intangible assets, (2) long-lived assets in accordance with ASC 360-10, and (3) goodwill in accordance with ASC 350-20.

## **Indefinite-Lived Intangible Assets Other Than Goodwill**

An entity should assess changes to its business as a result of climate-related initiatives, since these could affect the value of its indefinite-lived intangible assets. As stated in ASC 350-30-35-4, an indefinite-lived intangible asset is one for which “there is no foreseeable limit on the period of time over which it is expected to contribute to the cash flows of the reporting entity.” Brands and trademarks are common examples of indefinite-lived intangible assets.

Indefinite-lived intangible assets are tested annually for impairment and more frequently if an event or a change in circumstances indicates that it is more likely than not that the intangible asset is impaired in accordance with ASC 350-30. ASC 350-30-35-18B provides examples of these events or changes in circumstances, which include, but are not limited to, financial performance, legal or political factors, entity-specific events, and industry or market considerations. On the basis of this assessment, if an entity determines that it is more likely than not that the carrying value of the intangible asset exceeds its fair value, the entity performs a valuation to determine the fair value of the asset and recognizes an impairment loss equal to the excess of the carrying amount of the intangible asset over its fair value.

A valuation technique that is often applied to the measurement of a brand or trademark is the relief from royalty method. This method, which focuses primarily on expected revenues and royalty rates, requires the entity to make fewer assumptions than other income methods. However, an entity may find it challenging to project revenues because of an expected shift in demand for its product due not only to changes in consumer buying decisions, as consumers seek to purchase more environmentally friendly products, but also to a change in the entity's ability to continue producing and selling its current products while also meeting any internal climate-related targets (such as a commitment to being carbon neutral by a certain date). Entities are expected to use their best estimate of all required business and valuation assumptions for this or other income methods used to measure the fair value of an indefinite-lived intangible asset.

In addition to evaluating the need for an interim impairment test, an entity should consider whether there are any indicators that an intangible asset classified as indefinite-lived has become finite-lived, which might occur if the entity changes its expected use of the asset in response to its strategy to produce more environmentally friendly products.

## **Long-Lived Assets**

An entity should consider whether it expects to experience (1) a decline in revenues, (2) an increase in costs (i.e., a decline in net cash flows), or (3) both, as a result of changes to its business to undertake climate-related initiatives. If so, such changes may indicate that the entity should test its long-lived assets for recoverability.

Entities are required by ASC 360-10-35-21 to test a long-lived asset (asset group) that is classified as held and used for recoverability “whenever events or changes in circumstances indicate that its carrying amount may not be recoverable” — for example, if there is a “significant adverse change . . . in the business climate that could affect the value of a long-lived asset (asset group).” Events or changes in circumstances that prompt a recoverability test are commonly referred to as “triggering events.” As an entity adjusts its business to align with climate-focused initiatives, it may experience one or more of the triggering events listed in ASC 360-10-35-21. For example, depending on the nature of the entity's business and its assets, it may determine that certain product lines will be phased out (as well as the related assets producing them) or that products will be produced by more environmentally friendly assets. Triggering events that may be present as a result of an entity's response to climate-related initiatives include, but are not limited to, a “significant adverse change in the extent or manner

in which a long-lived asset (asset group) is being used or in its physical condition,” a “significant adverse change in legal factors or in the business climate that could affect the value of a long-lived asset (asset group), including an adverse action or assessment by a regulator,” or a “current expectation that, more likely than not, a long-lived asset (asset group) will be sold or otherwise disposed of significantly before the end of its previously estimated useful life.”

ASC 360-10-35-23 states, in part, that “a long-lived asset or assets shall be grouped with other assets and liabilities at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities.” Such a combination is called an asset group.

An asset group may include not only long-lived assets that are within the scope of ASC 360-10 but also other assets such as receivables, inventory, indefinite-lived intangible assets, or goodwill. ASC 360-10-15-5 provides a list of assets that are not in the scope of ASC 360-10. Note that ASC 360-10 applies to long-lived assets that are not in the scope of other GAAP, such as PP&E, finite-lived intangible assets (e.g., customer relationships, technology, brands, and tradenames), and right-of-use (ROU) assets.

To test a long-lived asset (asset group) for recoverability, an entity compares the carrying value of the asset (asset group) to the undiscounted net cash flows generated from the asset's (asset group's) use and eventual disposal. While the use of undiscounted cash flows generally indicates that a long-lived asset (asset group) is less prone to impairment, a long-lived asset (asset group) may not be recoverable if reductions in the estimates of undiscounted cash flows are based on changes to the entity's business operations as it supports climate-related initiatives in its business as demanded by consumers. For example, the net cash flows expected to be generated from the eventual disposal of a piece of machinery may decline if the machinery is not deemed environmentally friendly and demand for the related product has decreased as a result of a heightened focus on climate-related initiatives by both entities and consumers. Therefore, the decline in expected salvage value may result in an impairment of the asset (asset group).

If an entity estimates future cash flows to test the recoverability of a long-lived asset (asset group), such an estimate should include only the future cash flows (cash inflows minus associated cash outflows) that are (1) directly associated with the asset (asset group) and (2) expected to arise as a direct result of the use and eventual disposition of the asset (asset group). To estimate future cash flows, the entity must consider both cash inflows and cash outflows. Note that ASC 360-10-35-30 states, in part, that the “assumptions used in developing [cash flow estimates should] be reasonable in relation to the assumptions used in developing other information used by the entity for comparable periods, such as internal budgets and projections, accruals related to incentive compensation plans, or information communicated to others.”

In addition, ASC 360 indicates that it may be useful for the entity to apply a probability-weighted approach when considering alternative courses of action to recover the carrying amount of a long-lived asset (asset group). Such an approach may be beneficial when the entity is considering alternative courses of action it may take as a result of its climate-related initiatives.

If the entity determines that the carrying amount of the long-lived asset (asset group) is not recoverable, it performs the next step in the impairment test by recognizing an impairment loss for the amount by which the carrying amount of the long-lived asset (asset group) exceeds its fair value. It then allocates that amount to the long-lived assets that are in the scope of ASC 360-10 “on a pro rata basis using the relative carrying amounts of those assets, except that the loss allocated to an individual long-lived asset of the group shall not reduce the carrying amount of that asset below its fair value whenever that fair value is determinable without undue cost and effort,” in accordance with ASC 360-10-35-28.



By contrast, if an entity determines that a long-lived asset (asset group) is recoverable, it does not recognize an impairment loss, even if the carrying value of that asset (asset group) exceeds its fair value. Regardless of whether an entity recognizes an impairment loss, it should still consider whether the existence of a trigger indicates that there has been a change in the useful life or salvage value of its long-lived assets. For example, an entity may determine that although a certain asset (asset group) is not impaired, it will not be in operation as long as originally intended because it will be phased out as more environmentally friendly assets are placed into service. In that case, the entity should revise the asset's (asset group's) useful life and depreciation or amortization estimates accordingly.

Sometimes, an entity may conclude that the affected long-lived assets will be sold, abandoned, or otherwise disposed of. Under ASC 360, if the held-for-sale criteria in ASC 360-10-45-9 are met, the entity is required to measure the asset (asset group) "at the lower of its carrying amount or [its] fair value less cost to sell" in accordance with ASC 360-10-35-43. A long-lived asset that will be abandoned will continue to be classified as held and used until it is disposed of. Such an asset is disposed of when it ceases to be used. However, as indicated in ASC 360-10-35-49, a "long-lived asset that [is] temporarily idled shall not be accounted for as if abandoned." Further, ASC 360-10-35-48 states, in part, that when "a long-lived asset ceases to be used, the carrying amount of the asset should equal its salvage value, if any."

## Goodwill

As an entity continues to adjust its business operations to support climate-related initiatives, it should consider whether such adjustments result in a triggering event that would require it to test the goodwill of one or more reporting units for impairment between annual testing dates. In addition, even if the entity does not identify a triggering event in between annual testing dates, it should consider its climate-related initiatives and their impacts on business operations when testing goodwill for impairment annually.

Under ASC 350-20-35-28 through 35-30, an entity is required to test goodwill for impairment at the reporting-unit level at least annually or "between annual tests if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount." ASC 350-20-35-3C provides examples of events and circumstances that may meet such a threshold and hence necessitate the testing of goodwill for impairment between annual tests. These include "a deterioration in general economic conditions," "a deterioration in the environment in which an entity operates," "a change in the market for an entity's products or services," "[o]verall financial performance such as negative or declining cash flows or a decline in actual or planned revenue or earnings compared with actual and projected results of relevant prior periods," and, "[i]f applicable, a sustained decrease in share price (consider in both absolute terms and relative to peers)."

A reporting unit with only a small cushion (excess of fair value over carrying amount) at the time of its most recent quantitative test is generally more susceptible to impairment, which may have been noted in prior disclosures related to goodwill of reporting units at higher risk for impairment.

An entity may choose to qualitatively evaluate relevant events or circumstances to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. Alternatively, an entity may skip the qualitative assessment and proceed directly to step 1 of the goodwill impairment test. In step 1 of the test, the entity compares the reporting unit's carrying amount, including goodwill, with its fair value and recognizes an impairment loss for any excess.

In January 2017, the FASB issued [ASU 2017-04](#),<sup>8</sup> which eliminated step 2 of the goodwill impairment test and the requirement to calculate the implied fair value of goodwill. While

<sup>8</sup> FASB Accounting Standards Update No. 2017-04, *Simplifying the Test for Goodwill Impairment*.

most entities have adopted the provisions of ASU 2017-04, the provisions are not yet effective for all entities (e.g., certain private companies and not-for-profit entities). Note that because ASC 350-20-35-18 is superseded by ASU 2017-04, entities that have adopted the ASU will no longer be permitted to book a “best estimate” of the impairment when step 2 is not complete and subsequently recognize any adjustment in the following reporting period when step 2 is complete.

When performing a quantitative test, an entity must develop certain business and valuation assumptions. If the entity is using an income approach to perform its fair value measurements, it must apply judgment when developing its prospective financial information and consider the impacts of its climate-related initiatives as well as potential shifts in consumer behaviors. For example, an entity may have plans to shut down a manufacturing facility and build a new one with new, more environmentally friendly equipment. In such a case, the entity should consider the impact of these plans, including the costs to close the current manufacturing facility, in its business assumptions. Uncertainty regarding the changes in an entity's business and the impact of those changes to support the entity's climate-related initiatives should also be considered. The entity is expected to use its best estimates of those business and valuation assumptions.

In addition, if the entity is using a market approach when performing its fair value measurements, it should consider whether any shifts in its business or that of its peers affect its ability to identify the appropriate multiples and transactions to use. Consultation with valuation specialists may be warranted in performing the quantitative test.

ASC 350 provides an accounting alternative for the subsequent measurement of goodwill for private companies and not-for-profit entities. While certain differences exist for entities adopting the accounting alternative, such entities are still required to test goodwill for impairment when a triggering event occurs.<sup>9</sup>

## Inventory

ASC 330 requires an entity to initially value its inventory at the cost needed to bring the inventory to its current condition and location. An entity generally determines that cost by using an acceptable cost flow method such as first in, first out or last in, first out (LIFO). Inventory that is measured by using any method other than LIFO or the retail inventory method (RIM) is subsequently valued at the lower of cost and net realizable value (i.e., the estimated selling price in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation). However, if inventory is measured by using LIFO or RIM, it is subsequently valued at the lower of cost or market.<sup>10</sup>

When estimating the net realizable value of inventory, management is required to consider all relevant facts and circumstances. If certain climate-related events occur, the estimates of net realizable value could be materially affected. For example, wildfires could significantly damage crops, or floods could significantly damage goods held in a warehouse. In addition, an entity's operations may be affected by new regulations, customer preferences, or its own initiatives related to environmental concerns — for example, a ban on the use of plastic bags or straws in certain states, new regulations related to aerosol cans, or changes in consumer preferences for LED lights that have negatively affected demand for the more traditional incandescent lights.

<sup>9</sup> The FASB currently has a project underway to revisit subsequent accounting for goodwill and the accounting for certain identifiable intangible assets for all entities, which includes consideration of amortizing goodwill and certain identifiable intangible assets. For more information, see the related [project update](#) page on the FASB's Web site.

<sup>10</sup> ASC 330-10-20 defines market as follows: “As used in the phrase lower of cost or market, the term market means current replacement cost (by purchase or by reproduction, as the case may be) provided that it meets both of the following conditions:

- Market shall not exceed the net realizable value
- Market shall not be less than net realizable value reduced by an allowance for an approximately normal profit margin.”

Historically, changes in regulations have typically come with enough advance notice for entities to prepare for such changes, and consumer behavior changes have in many cases been gradual. However, with the current focus on sustainability and environmental matters, both regulatory actions and changes in consumer behavior may occur more rapidly and frequently in the future; therefore, entities should closely monitor such potential developments and any related impacts on inventory values.

## Taxes

The tax effects of law changes designed to bring about environmental changes (e.g., the elimination or introduction of certain environmental tax credits) should not be anticipated; rather, entities should account for a change in tax law in the period in which the change is enacted. Entities should also be aware that not all forms of tax credits will fall within the scope of ASC 740. For example, those that can only be monetized against non-income-based taxes would be accounted for in accordance with other accounting literature.

In addition, if, as a result of environmental initiatives, entities make or plan to make changes to their operations that affect their profitability, positively or negatively, they should consider how such changes might affect their income tax accounting under ASC 740. For example, a reduction in current-period income or the actual incurrence of losses, coupled with a reduction in forecasted income or a forecast of future losses, could result in a reassessment of whether it is more likely than not that some or all of an entity's deferred tax assets are realizable and a need to recognize a valuation allowance. Entities will also need to consider the character (i.e., capital or operating) of incurred losses to evaluate whether there is sufficient income of the appropriate character to fully realize the related deferred tax asset. Such assessments could be particularly challenging in situations in which the changes in current and projected future profitability actually result in or are expected to result in cumulative losses in recent years and the entity has not had a stable earnings history before factoring in the impacts of its environmental initiatives.

## Leases

### **ROU Asset Impairment (Lessee Accounting)**

Impairments of ROU assets could occur as a result of an entity's decision to abandon a current lease in favor of a lease for environmentally sustainable PP&E (e.g., if an entity decides to change the location of its corporate headquarters or manufacturing facilities). Such a decision could negatively affect the future cash flows expected to be derived from the original underlying PP&E.

ROU assets are subject to the impairment and disposal guidance in ASC 360; therefore, a lessee must test its ROU assets for impairment in a manner consistent with the treatment of other long-lived assets. In accordance with ASC 842-20-35-9, a "lessee shall determine whether a right-of-use asset is impaired and shall recognize any impairment loss in accordance with Section 360-10-35 on impairment or disposal of long-lived assets." Therefore, the impairment analysis of ROU assets would be included as part of the analysis for long-lived assets that are held and used.

In accordance with ASC 842-20-35-10, an impaired ROU asset should be subsequently measured at its carrying amount (after the impairment) less any accumulated amortization. Subsequent amortization of the ROU asset (for both operating and finance leases) would be on a straight-line basis unless another systematic basis is more representative of the pattern over which the lessee expects to consume the remaining economic benefits of the right to use the underlying asset.

In connection with its reevaluation of leases or lease portfolios on a go-forward basis, an entity should consider whether a decision to no longer use a leased asset constitutes an

abandonment of the asset from an accounting standpoint. The entity's conclusion may represent a triggering event that prompts it to perform a recoverability test. For a leased asset to be deemed abandoned, an entity must not have the intent and ability to sublease the leased asset at any point during the remaining lease term. When determining whether it would have the intent and ability to sublease the asset, the entity should consider the economic environment and the expected demand in the sublease market. Consequently, an entity may be required to use more judgment when assessing leases with longer remaining terms. An entity that has the intent and ability to sublease an asset at any point in the future would be precluded from considering an asset to be abandoned. For more information, see [Q&A 8-12](#) in Deloitte's Roadmap *Leases*.

### **Leases for Assets With No Future Economic Benefit and Impairment of a Net Investment in a Lease (Lessor Accounting)**

As a result of technological advancements, customer preferences, and increasing stakeholder concerns, some entities have shifted away from older, less efficient equipment toward environmentally friendly alternatives (e.g., hybrid or electric cars, buildings with solar panels, energy efficient manufacturing equipment). Entities that operate as lessors of less desirable PP&E may have assets that are no longer expected to have the future economic benefit that was originally anticipated.

When a lessor enters into a sales-type lease or a direct financing lease, it derecognizes the underlying asset and records a new asset in its place. The new asset or "net investment" consists of two components: (1) the sum of the lease receivable in accordance with ASC 310 and (2) the present value of the unguaranteed residual asset in accordance with ASC 360. Although there are two components of the net investment, ASC 842 requires lessors to evaluate the net investment for impairment as one component. The net investment in a lease is typically primarily composed of a financial lease receivable (i.e., the unguaranteed residual is often insignificant) and therefore should be accounted for as a financial asset under ASC 310. The lessor's net investment must be monitored for impairment in accordance with the applicable guidance. As indicated in ASC 842-30-35-3, the lessor should include in its impairment analysis the cash flows it expects to receive from the "lease receivable and the unguaranteed residual asset during and following the end of the remaining lease term." Accordingly, these cash flows should include the amounts the lessor expects to receive for re-leasing or selling the underlying asset to a third party.

If decreases in expected consumer demand or changes in regulations, for example, result in diminished expected economic benefits from a lease, the lessor must use judgment when considering whether it is required to make any changes to the underlying asset's residual cash flows. A reduction in the expected cash flows generated from the asset following the end of the lease term could result in a required impairment. For more information, see [Q&A 9-14](#) in Deloitte's Roadmap *Leases*.

### **ESAs That May Contain Embedded Leases**

As a result of increased focus on the environment and corporate accountability, many entities have been actively seeking out ways to transform their current operations to maximize environmental sustainability while limiting up-front capital expenditures. One increasingly common method is through use of an ESA. ESAs are often marketed as an "off-balance-sheet financing solution" that will allow entities to capture the benefits of new efficient equipment without incurring the up-front capital expenditures associated with it. The typical term of an ESA is anywhere between 5 and 15 years. Under an ESA, the vendor will analyze the company's current energy infrastructure and understand its level of energy consumption. This evaluation forms the "base-line" energy consumption that the vendor promises to reduce.

In addition to performing various services in connection with the ESA, the vendor will often replace all, or a portion, of the entity's existing energy infrastructure (e.g., HVAC systems,

boilers, lightbulbs) with new high-efficiency, environmentally sustainable equipment. The vendor usually bears the costs associated with the new machinery and its installation and also retains title to the equipment. In many ESAs, the vendor pays for required maintenance throughout the duration of the contract. Payments to the vendor are generally based on the company's actual cost savings — for example, as a percentage of the actual savings or according to some type of formula linked to the entity's cost savings.

To determine the appropriate accounting for an ESA, an entity should consider whether the agreement includes an embedded lease for the underlying equipment. As indicated in ASC 842-10-15-3, a "contract is or contains a lease if the contract conveys the right to control the use of identified property, plant, or equipment (an identified asset) for a period of time in exchange for consideration." The concept of "control" is expanded upon in ASC 842-10-15-4, which states, in part, that "[t]o determine whether a contract conveys the right to control the use of an identified asset . . . for a period of time, an entity shall assess whether, throughout the period of use, the customer has both of the following:" the "right to obtain substantially all of the economic benefits from use of the identified asset" and the "right to direct the use of the identified asset." Although an entity must use judgment in determining whether an agreement includes a lease, a key indicator that an embedded lease exists within a service agreement is if the service provider conveys control of the equipment to the entity. We have observed that in many instances, ESAs will be deemed to include a lease because the entity is able to control when the equipment is actually used and at what levels, among other factors.

If, on the basis of the terms of an ESA, the entity concludes that a lease exists, it will need to determine the lease payments so that it can ascertain the lease classification and calculate the associated ROU asset and lease liability. In many ESAs, the entity only pays the vendor to the extent there are energy cost savings, which will vary from month to month. On the surface, this may appear to be an entirely variable lease payment stream, which would result in no lease liability and therefore no ROU asset at lease inception. However, the entity must consider the specific terms of the ESA to determine whether these payments, or a portion of these payments, constitute an in-substance fixed payment. Under ASC 842-10-55-31, "in substance fixed payments are payments that may, in form, appear to contain variability but are, in effect, unavoidable;" therefore, these payments are indistinguishable from fixed payments and should be considered in the calculation of the ROU asset and lease liability. However, if all payments are determined to be variable, from a lease accounting standpoint, an entity would not record an ROU asset or a lease liability. It is essential for an entity to understand what is driving the variability in its ESA when making this determination, since different ESAs may have different drivers of variability. Relevant considerations include whether the customer has any minimum usage requirements and whether the vendor is exposed to genuine economic downside on the basis of the PP&E's performance (e.g., downside risk if the PP&E fails to meet predefined efficiency standards). Portfolio considerations may also arise because there is typically a large volume of equipment deployed and monitored in the aggregate for performance.

As ESAs continue to rise in popularity and evolve, entities are encouraged to consult with their advisers regarding the appropriate accounting treatment.

## **Virtual Power Purchase Agreements**

Physical power purchase agreements (PPAs) are commonplace in the utilities industry and are a means through which entities can secure the future output of a power-generating facility for a contracted long-term period at a predetermined price. These agreements can be either for traditional power generation that results in greenhouse gas emissions or for renewable energy. Under a traditional PPA, the buyer takes ownership of the power produced by the power-generating facility and either uses the power for its own operations or sells the power in a secondary market.

In recent years, VPPAs have emerged as a flexible tool through which an entity can support the renewable energy market, offset its electricity use from traditional sources, and meet its stakeholders' clean energy goals without drastically altering its current power structure. VPPAs are often particularly appealing to entities for which green power options are too expensive or not practical in light of their structure and size.

Owners of renewable energy facilities, such as wind farms, may be entitled to receive renewable energy certificates (RECs). The number of RECs awarded is typically linked to a power production formula as determined by the applicable regulator. These RECs can be kept by the producer or sold in a secondary market. In a VPPA, the buyer does not retain the power produced by the renewable energy facility; instead, the power component of the transaction is financially settled while the buyer receives all or a predetermined amount of the generated RECs for each year of the contract term for an agreed-upon price. The RECs can be used to meet a renewable portfolio standard or simply retired, thus contributing to the environmental sustainability objectives of the buyer.

When evaluating a VPPA, an entity must consider the specific terms of the agreement and determine whether the VPPA represents a variable interest as defined in ASC 810-10-55-17. If the entity concludes that the VPPA is a variable interest, it must also consider the guidance outlined in ASC 810 to determine whether the corporate buyer needs to consolidate the owner of the renewable energy facility.

The buyer should also consider whether a VPPA is a lease for the underlying assets that comprise the renewable energy facility. In accordance with ASC 842-10-15-3, a "contract is or contains a lease if the contract conveys the right to control the use of identified property, plant, or equipment (an identified asset) for a period of time in exchange for consideration." The determination of whether a VPPA includes a lease involves judgment, and the entity will need to evaluate whether it has the right to control the underlying assets (i.e., the assets used in the production of the renewable energy and RECs) as defined in ASC 842-10-15-4. However, in our experience, a VPPA generally will not contain a lease because, as a result of the technology involved (e.g., wind, solar), the buyer does not control the timing of power generation.

A challenging question that often arises is whether a VPPA includes a derivative. As described in ASC 815-10-15-83, a derivative "is a financial instrument or other contract with all of the following characteristics:

- a. Underlying, notional amount, payment provision. . . .
- b. Initial net investment. The contract requires no initial net investment or an initial net investment that is smaller than would be required for other types of contracts that would be expected to have a similar response to changes in market factors.
- c. Net settlement."

When evaluating whether a derivative exists, an entity should determine whether the VPPA consists of a bundled product or two discrete components (i.e., the renewable energy produced and the REC). In addition, while all the criteria noted above need to be examined carefully, an entity may need to use significant judgment when determining whether a notional amount exists in these arrangements. For example, such a determination may be affected by whether the VPPA contains any minimum production guarantees. Practitioners should consider involving appropriate specialists and advisers when evaluating the accounting for a VPPA.

## Insurance Recoveries

Entities that incur losses stemming from climate-related events may be entitled to insurance recoveries. For example, in certain cases, losses from closed facilities or disrupted supply chains may be insured if they are associated with property damage from hurricanes, wildfires, or tornados. Furthermore, entities may have business interruption insurance that provides coverage for lost profits that are caused by a suspension of their operations due to certain weather-related events.

## Insured Losses

If an entity incurs a loss attributable to damaged property or to the incurrence of a liability and it expects to recover all or a portion of that loss through an insurance claim, it should record an asset in the amount for which recovery from the insurance claim is considered probable (not to exceed the amount of the total losses recognized). If the total loss exceeds the amount for which recovery from the insurance claim was initially deemed probable, the entity should subsequently recognize the excess portion only to the extent that it does not exceed actual additional covered losses or direct incremental costs incurred to obtain the insurance recovery. A conclusion that a potential insurance recovery is probable may involve significant judgment and should be based on all relevant facts and circumstances. In determining whether it is probable that an insurance recovery will be received, an entity will most likely need, among other factors, to understand the solvency of the insurance carrier and to have had enough dialogue and historical experience with the insurer regarding the specific type of claim to assess the likelihood of payment. Other potential challenges an entity may encounter when evaluating whether a loss is considered recoverable through insurance include, but are not limited to, understanding (1) the extent of coverage and limits, including multiple layers of insurance from different carriers, and (2) the extent, if any, to which the insurance carrier disputes coverage. Consultation with legal counsel may also be necessary.



### Connecting the Dots

We believe that while applicable to SEC registrants, the following guidance from footnote 49 of [SAB Topic 5.Y](#)<sup>11</sup> applies to all entities evaluating an insured loss that is contested by the insurance carrier:

The staff believes there is a rebuttable presumption that no asset should be recognized for a claim for recovery from a party that is asserting that it is not liable to indemnify the registrant. Registrants that overcome that presumption should disclose the amount of recorded recoveries that are being contested and discuss the reasons for concluding that the amounts are probable of recovery.

Any expected recovery that is greater than covered losses or direct incremental costs incurred represents a gain contingency and therefore has a higher recognition threshold. An entity should generally recognize insurance proceeds that will result in a gain when the proceeds are either realized or realizable, whichever occurs first. Such insurance proceeds are realized when the insurance carrier settles the claim and no longer contests payment. Payment alone does not mean that realization has occurred if such payment is made under protest or is subject to refund.

## Business Interruptions

Climate-related events can also lead an entity to temporarily suspend operations in cases in which, for example, there is a lack of power for an extended period or the entity is unable to access manufacturing locations as a result of city ordinances. Business interruption insurance differs from other types of insurance coverage in that it is designed to protect the prospective earnings or profits of the insured entity. That is, business interruption insurance provides coverage if business operations are suspended because of the loss of use of property and equipment resulting from a covered loss, and it also generally provides for reimbursement of

<sup>11</sup> SEC Staff Accounting Bulletin (SAB) Topic 5.Y, "Accounting and Disclosures Related to Loss Contingencies."

certain costs and losses incurred during the interruption period. Such costs may be analogous to losses from property damage; accordingly, it may be appropriate to record a receivable for amounts whose recovery is considered probable. We encourage entities to consult with their independent auditors in connection with their evaluation of whether a receivable may be recorded for expected insurance recoveries associated with fixed costs incurred during an interruption period.

The loss of profit margin is considered a gain contingency and should be recognized when the gain contingency is resolved (i.e., the proceeds are realized or realizable). Because of the complex and uncertain nature of the settlement negotiation process, such recognition generally occurs at the time of final settlement or when nonrefundable cash advances are made.

## **Classification of Insurance Recoveries**

ASC 220-30-45-1 addresses other income statement presentation matters related to business interruption insurance from the perspective of classification and allows an entity to “choose how to classify business interruption insurance recoveries in the statement of operations, as long as that classification is not contrary to existing [U.S. GAAP].”

For presentation within the statement of cash flows, ASC 230-10-45-21B states, in part, that “[c]ash receipts resulting from the settlement of insurance claims, excluding proceeds received from corporate-owned life insurance policies and bank-owned life insurance policies, shall be classified on the basis of the related insurance coverage (that is, the nature of the loss).” For example, insurance settlement proceeds received as a result of claims related to a business interruption should be classified as operating activities.

## **Financial Instruments and Contract Assets**

### **Sustainability-Linked Debt Instruments (Issuer’s Considerations)**

Entities that seek to demonstrate their corporate social responsibility may issue debt instruments tied to environmental factors (sometimes also referred to as sustainability factors). Such environmentally linked debt instruments include sustainability-linked bonds and sustainability-linked loans. With regard to structure, the terms of sustainability-linked debt instruments and conventional debt instruments may be largely similar. However, each sustainability-linked debt instrument may be issued for different purposes and have unique environmental linkage. For example, (1) debt instruments may be subject to early redemption if the borrower fails to meet a target sustainability metric (e.g., on the basis of S&P Global ESG Scores) on a specified date, (2) the contractual interest rate may be reduced if the borrower achieves predefined targets for reducing greenhouse gas emission, or (3) the contractual interest rate might increase if the borrower fails to achieve the targets. When issuing debt instruments with cash flows linked to environmental factors, an entity needs to consider whether the arrangement contains an embedded feature or features that must be separately accounted for as a derivative under ASC 815-15 (if the fair value option is not applied).

Under ASC 815-15-25-1, an entity is required to separately account for a feature embedded within another contract (the host contract) if the following three conditions are met:

- The embedded feature and the host contract have economic characteristics and risks that are not clearly and closely related.
- The hybrid instrument (i.e., the combination of the embedded feature and its host contract) is not remeasured at fair value, with changes in fair value recorded immediately through earnings (e.g., under the fair value option election in ASC 815-15-25-4 or ASC 825-10).
- The embedded feature — if issued separately — would be accounted for as a derivative instrument under ASC 815-10. In evaluating whether this condition is met, the entity considers the definition of a derivative in ASC 815-10 and the scope exceptions from derivative accounting in ASC 815-10 and ASC 815-15.



The following outlines considerations related to the bifurcation analysis of certain features embedded in sustainability-linked debt instruments:<sup>12</sup>

- *Redemption features* — Debt instruments may contain features that trigger an acceleration or deferral of the due date or an adjustment of the repayment amount (1) upon the occurrence or nonoccurrence of a specified environmental event or events or (2) on the basis of an environmental metric. Generally, a redemption feature embedded in a debt host meets the definition of a derivative irrespective of whether the debt host contract is readily convertible to cash under the guidance in ASC 815-10-15-107 because neither party is required to deliver an asset associated with the underlying. The scope exceptions under ASC 815-10-15-13 and ASC 815-15-15-3 are usually not applicable for redemption features embedded in a debt host (e.g., there is no specific scope exception for sustainability-linked features). If no scope exception is available, a borrower's determination of whether a redemption feature must be bifurcated as a derivative is based on whether the feature is considered clearly and closely related to the debt host contract. Typically, the borrower should evaluate whether the redemption feature is clearly and closely related to the debt host under the four-step decision sequence in ASC 815-15-25-42.
- *Contingent interest rate features* — Debt instruments may specify that the contractual interest rate (1) will be reduced by a certain amount if the borrower achieves predefined targets, such as reaching carbon neutral by a specified date, or will be increased if the borrower fails to achieve those targets or (2) will vary on the basis of changes in an index tied to specified environmental metrics. ASC 815-15-25-26 addresses whether an embedded feature whose only underlying is an interest rate or interest rate index should be considered clearly and closely related to a debt host contract. The guidance does not address features that are indexed to or contingent on something other than an interest rate or interest rate index, including features that are indexed to both an interest rate or interest rate index and other underlyings (e.g., environmental targets or key performance indicators). Under the existing guidance, generally, only certain features that are based on a market interest rate, an entity's credit risk, or inflation are viewed as clearly and closely related to a debt host contract. Therefore, features that adjust the interest rate of a debt instrument on the basis of an environmental factor might have to be bifurcated as a derivative unless a specific scope exception is available.

Given the wide variety of environmentally linked terms and the evolving nature of these instruments, entities are strongly encouraged to discuss their accounting analysis with their advisers.

For more details about the manner in which specific embedded features should be evaluated to determine whether they require bifurcation as derivatives, see [Section 8.4](#) of Deloitte's Roadmap *Issuer's Accounting for Debt*.

If the environmental-factor-related embedded derivatives must be accounted for separately from the debt host contract, the issuing entity must appropriately allocate the proceeds between the debt instrument and the features that are accounted for separately. Specifically, under the allocation method in ASC 815-15-30-2, the borrower is required to record "the embedded derivative at fair value and [determine] the initial carrying value assigned to the [debt] host contract as the difference between the basis of the hybrid instrument and the fair value of the embedded derivative." Note that the determination of the fair value of environmental-factor-related embedded derivatives involves complexity and often requires the involvement of valuation specialists.

<sup>12</sup> Note that this discussion assumes that the debt is not measured at fair value on a recurring basis (e.g., the issuer has not elected the fair value option in ASC 815-15-24-4 or ASC 825-10). In addition, an entity should always consider the terms and conditions of a specific feature in light of the applicable accounting guidance before reaching a conclusion.

## **Sustainability-Linked Debt Instruments (Holder's Considerations)**

Holders of sustainability-linked debt instruments (e.g., an investor or a lender) can account for such instruments at fair value by (1) applying a fair value option election in accordance with ASC 815-15 or ASC 825-10 or (2) classifying the instruments as trading securities in accordance with ASC 320-10-25-1 if they qualify as debt securities. If sustainability-linked debt instruments are not accounted for at fair value (e.g., the fair value option is not applied), with changes in fair value recorded immediately through earnings, holders also need to consider whether the environmental factor is an embedded feature that must be separately accounted for as a derivative under the aforementioned guidance and considerations.

## **Impairment Considerations (CECL)**

Given rapidly evolving regulation over environmental matters, technology developments that focus on the replacement of environmentally unfriendly products and processes, and changes in customer preferences and behavior, entities need to consider whether these environment-related changes affect their business and credit risks.

Entities that have adopted ASC 326 must apply the current expected credit loss (CECL) impairment model to recognize (1) credit losses on financial assets with contractual cash flows that are carried at amortized cost (including financing receivables, held-to-maturity debt securities, and reinsurance receivables), (2) net investments in leases (except for operating lease receivables), and (3) off-balance-sheet credit exposures. Because the CECL model is based on expected losses rather than incurred losses, an allowance for credit losses under ASC 326-20 reflects (1) a risk of loss (even if remote) and (2) losses that are expected over the contractual life of the asset.

The allowance takes into account historical loss experience, current conditions, and reasonable and supportable forecasts. Because the CECL model does not specify a threshold for recognizing an impairment allowance, entities should assess the current and expected future effects of any expected changes in the regulatory or technological environment, or both, as a result of environmental factors and incorporate such effects into their estimate of expected credit losses on each reporting date.

If ASC 326 has not yet been adopted, creditors that lend to entities that may be affected by new environmental regulation requirements and other related factors will need to assess whether impairment evaluation is required if certain events occur (such as a new regulation limiting usage of certain water pollutant material that is essential to an entity's manufacturing process, thus reducing the entity's cash flows and liquidity).

## **Environmental Obligations**

Changes in laws and regulations may affect the timing and cost of environmental remediation obligations, which have a direct impact on the associated environmental remediation liability. An entity should consider whether changes to current laws and regulations in the jurisdictions in which it operates affect its recording of environmental remediation obligations.

ASC 410-30 provides guidance on measuring an estimated environmental remediation liability, including how to consider the effects of future developments. Specifically, ASC 410-30-35-4 requires entities to recognize the "impact of changes in laws, regulations, and policies . . . when such changes are enacted or adopted." If the estimated costs of remediation obligations change on the basis of new information, such changes are considered changes in estimates under ASC 250 and should be recognized in the period in which the laws or regulations are enacted or adopted.

For example, an entity may be remediating an environmental site in a state in which laws and regulations require it to remediate groundwater contamination and subsequently monitor water quality at the site to verify the efficacy of the remedy for a stated number of years before declaring the site closed. The recorded environmental liability would be based on (1) the remaining time and cost needed to achieve the remediation plan in accordance with the state laws and regulations, (2) costs related to post-remediation monitoring, and (3) an assumption that the site would receive remedial closure or a “no further action” letter once the specific criteria are met (i.e., the environmental obligation would be zero at that point in time). If, perhaps in response to concerned citizens demanding more stringent requirements, the state amends its laws and regulations to include indefinite monitoring of the site (i.e., the site would not officially close), the entity would account for the cost of those changes in the period the new laws and regulations go into effect and should measure the environmental obligation in accordance with ASC 410-30.

It is important to note that, as indicated in ASC 410-30-15-3(c), the guidance in ASC 410-30 does not apply to “[e]nvironmental remediation actions that are undertaken at the sole discretion of management and that are not induced by the threat . . . of litigation or of assertion of a claim or an assessment.” Therefore, ASC 410-30 does not require the recognition of a liability for environmental remediation activities that are voluntarily undertaken by a reporting entity. The decision to incur the costs of performing such activities in the future does not give rise to a present liability since the entity has considerable discretion in changing its plans and avoiding the expenditure.

## **Asset Retirement Obligations**

Unlike environmental liabilities that result from the improper use of an asset, AROs are legal or contractual obligations to perform remediation activities resulting from the proper, intended use of a long-lived asset. Entities should consider whether changes to their operations trigger a remeasurement of their AROs. Changes in operations that result in a change in management’s intended use of an asset — including a change in its plans to maintain the asset, extend its useful life, or abandon the asset earlier than previously expected — may affect the recorded amount of an ARO associated with the asset, including the timing associated with the retirement activities.

ASC 410-20 provides the relevant guidance on accounting for AROs, including subsequent measurement considerations for revising either the timing or amount of the original estimate of cash flows used for measuring the fair value of the obligation. Specifically, ASC 410-20-35-8 states, in part, that “[c]hanges resulting from revisions to the timing or the amount of the original estimate of undiscounted cash flows shall be recognized as an increase or a decrease in the carrying amount of the liability for an asset retirement obligation.”

For example, consider an entity that has pledged to reduce its carbon emissions in response to pressure from investors to transition to greener operations. To achieve this reduction, the entity plans to retire certain carbon-emitting assets and replace them with greener, low-carbon assets. If the older, carbon-emitting assets were required to be decommissioned and removed per the contractual agreement between the entity and the landowner and, as a result, the entity recorded an ARO on its books, it should consider whether (1) the early retirement of the carbon-emitting assets also results in the acceleration of the cash flows associated with retirement activities necessary to satisfy the ARO and (2) it is required to revise the ARO in accordance with ASC 410-20.

## Compensation Agreements

As a means of driving sustainability, some entities link incentive pay for executives and employees to environmental metrics. For example, an auto executive's bonus might depend on advancing the company's electric vehicles, hybrid vehicles, or ride-sharing business, or a financial services firm's executives might be rewarded for the percentage of capital that is allocated to worthy sustainable projects, such as renewable energy or sustainable agriculture. In such cases, there may be various accounting considerations, which depend on the specific climate-related metrics used, how performance is measured against those metrics, and the terms of the bonus arrangement.

Many entities use cash bonus plans to compensate their executives and employees. Annual bonus plans may be based on specific formulas and performance targets and are communicated early in the year. In some plans, annual bonus amounts are linked to environmental targets based on metrics that are unknown until after the end of a fiscal year and, thus, the bonus amounts may not be finalized until after the financial statements are issued. In addition, bonuses may be forfeited if an employee is terminated or resigns.

Entities should have a clear method of measuring and monitoring performance related to environmental metrics that are included in an annual or multiyear compensation agreement so they can calculate the bonus accrual and update such amounts throughout the year under ASC 450-20 and ASC 710 (when the cash bonus plan is not subject to other applicable U.S. GAAP, such as ASC 718). If the amount of the bonus that will be achieved or granted is uncertain, the entity should compute a range in accordance with ASC 450-20-30-1, which indicates that if "no amount within the range is [considered] a better estimate than any other amount," the low end of the range should be selected. Entities must carefully evaluate bonuses that are based on achievement of a target to determine whether such achievement is probable and reasonably estimable.

Once an entity has determined the amount of the probable bonus, it should recognize that amount over the service period. Recognizing compensation expense in this manner is analogous to recognizing expense in connection with stock-based compensation arrangements over the related service period, as required by ASC 718. Under this model, the obligating event giving rise to the liability is considered the employee's performance of service. Recognition of a bonus liability should not be delayed just because the bonus would not be paid if the employee were to terminate employment before the end of the service period. Rather, if a reliable estimate of employee turnover is possible, the entity may factor this estimate into the range of estimates when determining the probable liability. Any difference between the actual bonus paid and the amount accrued is considered a change in accounting estimate. For more information, see Deloitte's Roadmap [Contingencies, Loss Recoveries, and Guarantees](#).

Similarly, the compensation arrangement could be in the form of a company's own stock instead of cash. For example, a utility company may grant its senior executives a sustainability performance stock award related to environmental metrics such as establishing new water recycling facilities by 20X5 or reducing carbon emissions by 2 million metric tons. Entities should pay particular attention to plan details that describe how the environmental metrics are defined and how the related performance against those metrics is measured. In some instances, entities may seek assistance from appropriate environmental specialists when establishing and evaluating these type of compensation arrangements.

ASC 718 requires the related cost to be recognized over the employee's requisite service period when a service period exists. For awards with performance conditions, an entity should assess the probability of meeting the performance condition and will only recognize compensation cost if it is probable that the condition will be met. The total compensation cost recognized will ultimately be based on the outcome of the performance condition. Share-based payment transactions are recognized by using a fair-value-based measurement method under ASC 718.

Note also that when a share-based compensation award with environment-related factors is indexed to a factor other than a service, performance, or market condition, the award may be classified as a liability. Liability-classified awards are generally remeasured by using fair-value-based measurement as of each reporting date until settlement. That is, changes in the fair-value-based measure of the liability at the end of each reporting period are recognized as compensation cost, either (1) immediately or (2) over the employee's requisite service period. Therefore, companies need to carefully evaluate the classification of their share-based awards. For more information, see Deloitte's Roadmap [Share-Based Payments Awards](#).

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